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ABSTRACT

This study was designed to assess, over a seven-year period from the commencement of teacher preparation through five years of teaching, the development of teachers' self, impact, and task concerns as formulated by Fuller for a longitudinal sample of teachers (N=60) and to determine what, if any, personal and academic attributes of teachers might be associated with these teachers' changes in concerns about teaching. Statistically significant developmental changes in the teachers' concerns about teaching were identified, as hypothesized by Fuller, with concerns about survival as a teacher (self concerns) decreasing and concerns about the task of teaching increasing; whereas the teachers' impact upon pupil concerns, in contrast to hypothesized changes in the Fuller model, were highest in intensity but relatively stable at all four points in career development. Changes in concerns during the teachers' careers were found to be related to their education grade point averages, gender, and personality type but not to their basic academic skills, academic majors, family characteristics, ACT scores, and locus of control orientations. (Contains 17 references.) (Author)

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A Seven-Year Longitudinal Multi-factor Assessment of Teaching Concerns Development Through Preparation and Early Years of Teaching

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Educational Foundations and Inquiry

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Abstract

This study was designed to assess, over a seven-year period from the commencement of teacher preparation through five years of teaching, the development of teachers' self, impact, and task concerns as formulated by Fuller for a longitudinal sample of teachers (N = 60) and to determine what, if any, personal and academic attributes of teachers might be associated with these teachers' changes in concerns about teaching. Statistically significant developmental changes in the teachers' concerns about teaching were identified, as hypothesized by Fuller, with concerns about survival as a teacher (self concerns) decreasing and concerns about the task of teaching increasing; whereas the teachers' impact upon pupil concerns, in contrast to hypothesized changes in the Fuller model, were highest in intensity but relatively stable at all four points in career development. Changes in concerns during the teachers' careers were found to be related to their education grade point averages,gender, and personality type but not with their basic academic skills, academic majors, family characteristics, ACT scores, and locus of control orientations.

A Seven-Year Longitudinal Multi-factor Assessment of Teaching Concerns Development Through Preparation and Early Years of Teaching

In a review of research related to the develoment of preservice and early inservice teachers, Kagan (1992) identified Fuller's model of the evolution of teachers' concerns as one of just two teacher development models based upon empirical research. Fuller (Fuller, 1969; Fuller & Bown, 1975) conceptualized the development of teachers' concerns as passing through phases which are sequential and accumulative. During early preservice preparation prospective teachers are characterized as not concerned about teaching, but being concerned about their own progress as students. Early field experiences in teacher preparation lead to prospective teachers' concerns about survival as teachers (self concerns), later in teacher preparation their concerns focus upon actual performance as teachers (task concerns), and finally, with successful teaching experiences, the more mature teachers' concerns focus upon having a meaningful and positive influence upon their pupils (impact concerns). The Fuller model further stipulates that appropriate preservice and inservice experiences are essential to the passage of teachers through these concerns phases (Fuller, 1970). To facilitate research on this theoretical framework, the Teacher Concerns Questionnaire was developed by George (1978).

In several studies of the Fuller model, predominately studies of limited duration and using cross-sectional samples, some of the hypothesized changes in prospective teachers' concerns have been identified. During five-year preservice training programs changes in teachers' self concerns have been identified but little or no change has been identified in prospective teachers' task and impact concerns (Adams, Hutchinson, & Martray, 1980; Adams & Martray, 1981; Sitter & Lanier, 1982). Adams (1982) identified differences in classroom teachers' task and self concerns, but found no differences in their impact concerns in cross-sectional samples of first, third, and fifth-year teachers. He found that teachers' self-survival concerns decreased and their teaching task concerns increased, but their impact

concerns remained stable and highest at each of the teaching experience points. Similarly, Pigge and Marso (1987) and Marso and Pigge (1989) identified increases in task concerns and decreases in self concerns but no differences in impact concerns for cross-sectional samples of teachers at different points in their preservice preparation and inservice teaching. These findings also were replicated with a longitudinal sample of prospective teachers progressing through their preservice training (Pigge & Marso, 1990).

Reeves and Kazelskis (1985) and others (see Kagan, 1992) raised questions about the adequacy of the samples studied in many of these investigations of the development of teachers' concerns. They speculated that all teachers cannot be expected to pass through the concerns stages at the same time. They suggested that this varied rate of progress factor is particularly problematic in studies where inservice teachers are placed in a single experience level group or into groups with modestly different years of preservice or inservice experience. They argued that this averaging of teachers' concerns scores under these conditions might conceal the fact that some teachers had progressed to later stages. Marso and Pigge (1994) attempted to alleviate this problem of diversity in teachers' developmental rates by selecting for study cross-sectional samples of outstanding teachers, the Fuller model hypothesizes that successful teaching experiences facilitate the developmental progression through concerns stages, who were at four distinctly different periods of career development. These samples of outstanding teachers at distinct career stages, namely commencement of preservice through 30 plus years of teaching, did reveal developmental change patterns similar to but not identical to those hypothesized by Fuller. Self concerns were found to be higher than task concerns initially and decreased while task concerns increased. The impact concerns were highest of the three types of concerns at all career points; however, the impact concerns of the outstanding teachers were higher during inservice career points than they were upon the commencement of preservice preparation, contrary to the Fuller model.

The purpose of the present longitudinal study was to assess the development of teaching concerns as postulated by Fuller (1969) over a seven-year period from the commencement of teacher preparation through five years of teaching and then to determine what, if any, personal and academic attributes of teachers might be associated with their development of conerns about teaching. More specifically, the present study was designed to answer the following questions: Do teachers' task, self, and impact concerns about teaching change from the commencement of teacher preparation through the early teaching years as theorized by Fuller? Are personal or family characteristics of teachers, such as gender, academic major, time when they made their decision to teach, presence of teachers in their family, and confidence in their decision to teach associated with their development of concerns about teaching? Are academic characteristics of teachers, such as American College Test and Comprehensive Test of Basic Skills scores, university education grade point average, and university supervisor ratings of their student teaching performance associated with their development of concerns about teaching? Are teachers' locus of control orientation and personality preferences (Myers-Briggs) associated with their development of concerns about teaching?

Methods and Procedures

The subjects for the present study consisted of 60 teachers from whom data was gathered at the commencement of their teacher preparation, near the end of their student teaching practicum, and near the end of their third and fifth years after their graduation from college. Upon commencement of teacher preparation at a large midwestern university the teacher candidates reported various personal and family characteristics, such as gender, family birth order, parental educational level, planned college major, and time at which they decided to teach. At this time the candidates also completed the Comprehensive Test of Basic Skills (CTBS) and the Teacher Concerns Questionnaire (George, 1978). Near the end of their student teaching practicum the candidates completed Rotter's Locus of Control (Rotter, 1966), the Myers-Briggs Type Indicator (Myers & McCaulley, 1985), and again the Teacher

Concerns Questionnaire. Upon graduation the American College Test scores, university supervisors' ratings of student teaching performance, and education grade point averages were obtained from the records of the candidates. And near the end of the school year the third and fifth years after their graduation the teachers again completed the Teacher Concerns Questionnaire.

The concerns instrument consists of 15 items with five items in each of the self, task, and impact scales. The response scale for each item is a continuum from not concerned '1' to extremely concerned '5'. George (1978) reported test-retest reliability coefficients in the 0.70's for the three scales and good construct validity evidence in the form of significant differences between preservice and inservice teachers' concerns for the self and task concerns but no differences for the impact scale. Rogan, Borich, and Taylor (1992) provided similar validity evidence for the concerns scales, and they also provided limited validation evidence for the impact scale.

Upon the commencement of teacher preparation the spring term of 1985, the teacher candidates were predominantly female (81%), elementary (57%) and secondary (43%) majors, very certain or almost certain about teaching (88%), from families with teachers in the present or prior generation (60%), children of parents with four-year college degrees (67%), from somewhat larger families (46% with three or more siblings), second or later birth order (66%), with some or considerable prior teaching-like experiences (73%), very confident about becoming unusually good to exceptionally effective future teachers (78%), from rural (33%) or suburban (54%) high schools of moderate to small size (61% with high school graduating classes of 300 or less), and most had decided to teach when in their elementary years (24%) or when in their high school years (50%).

The primary statistical analyses (ANOVA) for this study were those related to two-factor "experiments" with repeated measurements on just one of the factors. The "within subjects" component permitted a determination whether the individuals differed significantly over the four points of time with respect to each of the dependent variables (task, self, and impact scales). The "between subjects"

component permitted tests of whether, for example, the males and females differed significantly in their various overall average concerns scores. Other classifications which were used for "between subjects" analyses were: the four dichotomous preference classifications of the Myers-Briggs (extroversion-introversion, sensing-intuitive, thinking-feeling, or judgment-perception); the externality locus of control high, middle, or low one-thirds locus classifications; the education grade point average, approximate high, middle, or low one thirds classifications; the basic academic skills composite scores (CTBS) high or low halves classifications; student teaching performance ratings classifications of high, middle, or low approximate one-thirds; the ACT composite scores approximate top and bottom one-halves classifications; time when the decision to teach was made, elementary grades, high school, or after high school graduation; and academic major, elementary or secondary. And the interaction terms permitted determinations whether time (career stages and the repeated component) and the various between subjects classifications interacted with each other on each of the three concerns scales.

Results

As a preliminary step, the task, self, and impact scores were anlayzed as though each were of a simple one-factor experiment with repeated measures. These tests revealed statistically significant mean differences between the teachers' four times in career development for the task and self scores but not for the impact scores as shown in Table 1. The impact means were highest and the task concerns the lowest at all four career stages with task concerns increasing from the commencement of teacher preparation, self scores declining with teaching experience, and impact concerns highest and stable across the four career stages.

Insert Table 1 about here

The means for the task concerns at the four times in career development, commencement of preparation, following student teaching, three years after graduation, and five years after graduation, were 11.66, 12.72, 13.48, and 13.17 respectively, $F(3,177) = 4.70$, $p = .004$. The Scheffe post-hoc pair-wise comparisons ($\propto = .10$) indicated that the mean for task concerns following the third and fifth years after graduation were higher than the mean task concerns measured upon commencement of training. No other pair-comparisons for the task scale differed significantly.

The means for self concerns at the four career stages were 16.45, 16.20, 15.94, and 13.45, respectively, $F(3,177) = 9.70$, $p = .001$. The Scheffe pair-comparisons indicated higher mean levels of self concerns at the three first career stages than at five years after graduation. No other pair-wise comparisons for the self scale were statistically different. The impact concerns means for the four career stages were 18.95, 18.18, 18.40, and 17.66 respectively, $F(3,177) = 1.12$, $p = .341$. Differences among these means were not statistically significant although the pattern of means over the four stages suggests that these concerns may have begun to decline five years after graduation.

The primary analyses of the study (two factor ANOVAs with repeated measurements on one factor) reveled, as expected, the same "time" (within subjects) conclusions as did the previously described simple repeated measurements analyses which were described via Table 1. In addition, these latter two-factor analyses produced three significant interaction F's between the four points in career development and the classifying variables and one significant main effect difference for a between subjects component. More specifically, the three significant interaction F's were: time in career x grade point average for the self concerns (see Table 2); time in career x Myers-Briggs sensing-intuitive preference for the self concerns (see Table 2); and time x grade point average for the impact concerns (see Table 3). Also, it was found that the females had a significantly higher mean impact concern score than did the males (see Table 3). None of the between subjects classifications revealed relationships with the task scores. The between subjects classifications formed from the locus of control orientation,

basic academic skill scores, student teaching performance ratings, college major, time at which the candidate decided to teach, and academic aptitude scores failed to reveal mean differences on any of the three sets of concerns scores. Similarly, the Myers-Briggs preferences extroversion-introversion, thinking-feeling, and judgment-perception classifications did not reveal mean differences on the three sets of concerns scores.

Insert Table 2 about here

The education grade point average classification did not reveal statistically significant main effect mean differences for the self and impact scores but revealed time in career x grade point interactions for each of these scales. More specifically, the main effect test for the educational grade point average classifications, high, middle, and low did not reveal statistically significant differences, $F(3,156) = 1.10$, $p = .341$. The time in career x grade point average classification interaction was statistically significant, $F(6,156) = 2.95$, $p = .009$, for the self scores, as reported in Table 2. Later analyses suggest that this significant interaction was created by the teachers beginning teacher preparation with comparable high levels of self survival concerns, but near the end of student teaching the high grade point level teachers reported lower levels of self concerns, at the end of three years of teaching the three groups reported similar levels of self concerns, and by the fifth year of teaching the high and low grade point average teachers reported lower levels of self concerns than did those teachers within the middle grade point average range as shown in Figure 1.

Insert Figure 1 about here

Similarly, the grade point classification did not reveal statistically significant main effect differences for the impact scores, $F(3,156) = 1.34$, $p = .272$, but did reveal a statistically significant time in career x grade point average interaction for the impact scores, $F(6,156) = 2.80$, $p = .013$ (see Table 3). Analysis of this interaction indicates that those with low grade point averages reported higher levels of impact concerns than their cohorts during teacher preparation, but by five years after graduation they reported lower levels of impact concerns; whereas the middle grade point average teachers reported lower levels of impact concerns than did the low grade point average teachers during preservice but higher levels of impact concerns than either their low or high grade point average cohorts five years after graduation (see Figure 2). In contrast, the high level grade point average teachers reported lower impact concerns than did their cohorts three years after graduation but lower than only their middle grade point average cohorts five years after graduation. For both of these interactions the teachers with lower grades in education began with higher levels of concerns but progressed to lower levels of concern.

Insert Table 3 about here

Insert Figure 2 about here

The gender row classification revealed a main effect mean difference with the impact scores indicating that the female teachers expressed higher levels of concerns ($\underline{M}$ =18.63) about influencing their pupils than did the male teachers ($\underline{M}$ = 15.29) $F(1,58) = 5.52$, $p = .022$. This gender difference was apparent at all four career points with no statistically significant gender x time in career interaction as shown in Table 3. This would suggest that the male teachers, regardless of career stage, generally feel

less concern than their female cohorts about having a positive impact upon their pupils. In this regard it should be noted that there were only six males involved in this analysis; however, prior research involving larger samples indicates (Marso & Pigge, 1989; Pigge & Marso, 1987) that males do report lower levels of impact concerns than do females, thus lending support for this present finding.

The sensing-intuitive Myers-Briggs classification did not reveal a statistically significant main effect difference, $F(1,53) = 0.02$, $p = .889$; however, a statistically significant sensing-intuitive x career stage interaction was identified for the self concerns scores, $F(3,159) = 3.25$, $p = .024$ (see Table 2). This interaction indicates that the sensing teachers, those who prefer to use known facts rather than looking for possibilities and relationships in dealing with their outer world, reported a higher level of self survival concerns upon commencement of techer preparation, but by the fifth year after graduation the sensing teachers reported a lower level of self concerns than did their cohorts classified as intuitives as shown in Figure 3.

Insert Figure 3 about here

Discussion

The assessment of the development of the teaching concerns in this longitudinal sample of teachers as they progressed through four career stages revealed an increase in concerns about the actual tasks of teaching as the teachers experienced the complexity of the classroom teaching-learning process as hypothesized in the Fuller model of teacher development. Further, and also consistent with the Fuller model, conerns of their self survival as teachers decreased as the teachers experienced successes with their teaching efforts. By the fifth year after graduation the teachers' task concerns were higher and their self concerns were lower than upon the commencement of teacher preparation.

Conversely, statistically significant mean differences were not identified between the four career stages for the teachers' concerns about their impact upon pupils as hypothesized in the Fuller model. The teachers' impact concerns remained stable and higher than the task and self concerns across the four career stages. This finding was similar to that of other studies previously cited (Pigge & Marso, 1990; Pigge & Marso, 1987; Adams, 1982; etc.).

In contrast to the findings of the present study, the Rogan, Borich, and Taylor (1992) and Marso and Pigge (1994) studies reported higher levels of impact concerns for teachers during inservice teaching than during the preservice teacher preparation years. Both of these earlier studies, however, utilized convenience samples of exceptional rather than typical teachers (graduate students and outstanding teachers, respectively) rather than longitudinal samples of more typical teachers which may account for the discrepancies noted between the present study and these two earlier studies.

Relative to the investigation of other variables that might be related to the development of teachers' concerns about teaching, it appears that the scores from the Teacher Concerns Questionnaire are relatively independent of other teacher characteristics. The locus of control, college major, basic academic skills, scholastic aptitude, ratings of the teacher performance in student teaching, the time at which the candidates decided to become teachers, and three of the four dichotomous Myers-Briggs preference classifications were not found to be related to the three sets of concerns scores.

Gender of the teachers was found to be related to the teachers' impact scores; the female teachers reported higher levels of concerns about their impact upon pupils. The Myers-Briggs sensing teachers reported higher levels of self survival concerns upon the commencement of teacher preparation but by the fifth year after graduation (statistical interaction with career stages) reported lower levels of self concerns than did their cohorts having an intuitive preference (Sensing types prefer to work with known facts rather than looking for possibilities and relationships in relating to their world.). Additionally, education grade point averages were found to be related to (statistical interaction with

career stages) both the self and impact concerns scores. The middle grade point average teachers reported lower self and impact scores upon the commencement of teacher preparation but higher self and impact scores five years after graduation from college than their higher or lower grade point average cohorts. The higher grade point average teachers reported relatively low impact concerns during all four career stages, whereas the middle grade point average teachers reported relatively low impact concerns during the preservice stage but relatively high levels of impact concerns during the inservice stage.

In summation, the findings from the present study suggest either the Fuller teacher concerns development model or the Teacher Concerns Questionnaire might have to be modified relative to the impact concerns; whereas findings from the present study involving the self and task concerns are generally consistent with the Fuller model. Just the middle grade point average teachers, but not their cohorts, exhibited the hypothesized pattern of increasing impact upon pupils concerns during early teacher development per the Fuller model. The Marso and Pigge (1994) study of a cross-sectional sample of teachers in preparation through 30 plus years of experience also revealed this pattern of change but, in contrast, the high grade point average pupils in the present study did not reveal such a pattern. Additionally, these findings suggest that the concerns measured by the Teacher Concerns Questionnaire are relatively independent of academic ability measures and various personal classifications of teachers. Relationships were identified, however, between the concerns scales and teachers' gender, education grade point average earned during teacher preparation, and the Myers-Briggs' sensing (preference for knowing facts versus relationships or possibilities in addressing the external world) versus intuitive preference. These relationships suggest that a) female teachers express more concern about having a positive impact upon their pupils than do their male cohorts, b) teachers who earn lower teacher education grades express less concern about having a positive impact upon their pupils than do their cohorts having earned higher education grades, and c) those

teachers classified as having a sensing preference progress from high to low levels of self survival concerns from the commencement of teacher training through five years of teaching relative to their intuitive cohorts.

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Table 1

Analysis Over Career Time of the Three Concerns Scores

		Career Stages Means (Time)						
Scale	N	Pre-teaching	Student Teaching	3rd year	5th year	Average	F	p
Task	60	11.66	12.72	13.48	13.17	12.76	4.70	.004
		A*	A B	B	B			
Self	60	16.45	16.20	15.94	13.45	15.51	9.70	.001
		A	A	A	B			
Impact	60	18.95	18.18	18.40	17.66	18.30	1.12	.341
		A	A	A	A			

* Means coded with the same letter do not differ significantly (Scheffe ∝ .10).

Table 2

Significant Findings Related to Analyses the Self Concerns Scores

			Career Stage Means (Time)					Time		Educ. GPA		Time x GPA	
Column Classification		N	Pre-Teaching	Student Teaching	3rd year	5th year	Total	F	p	F	p	F	p
Educ.	Hi	22	16.14	14.27	15.64	13.36	14.85	7.74	.001	1.10	.341	2.95	.009
GPA:	Mid	12	15.92	17.33	16.75	15.83	16.46						
	Low	21	16.90	17.86	16.35	11.95	15.77						
	Total	55	16.38	16.31	16.15	13.36	15.55						
										Sensing-Intuitive		Time x S-I	
Myers	S	30	17.23	15.83	15.74	12.37	15.29	8.09	.001	0.02	.889	3.25	.024
Briggs:	I	25	15.24	16.16	15.84	14.44	15.42						
	Total	55	16.32	15.98	15.79	13.31	15.35						

Table 3

Significant Findings Related to Analyses the Impact Scores

			Career Stage Means (Time)					Time		Educ. GPA		Time x GPA	
Column Classification		N	Pre-Teaching	Student Teaching	3rd year	5th year	Total	F	p	F	p	F	p
Educ.	Hi	22	18.55	17.36	16.68	17.64	17.56	0.39	.762	1.34	.272	2.80	.013
GPA:	Mid	12	17.67	17.50	19.67	19.88	18.68						
	Low	21	20.14	20.24	19.43	16.52	19.08						
	Total	55	18.96	18.49	18.37	17.70	18.38						
										Gender		Time x Gender	
Gender:	Male	6	16.43	16.43	14.71	15.57	15.79	0.45	.719	5.52	.022	0.36	.779
	Female	48	19.28	18.42	18.89	17.93	18.63						
	Total	54	18.96	18.20	18.43	17.67	18.31						

Figure 1
Self Concerns

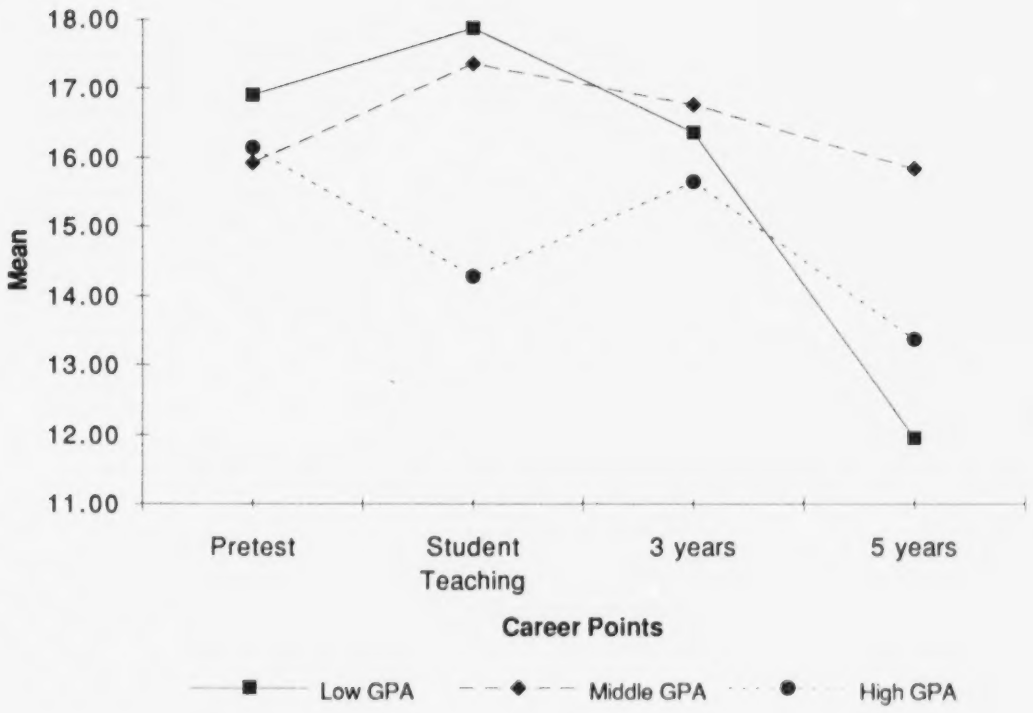

Figure 2
Impact Concerns

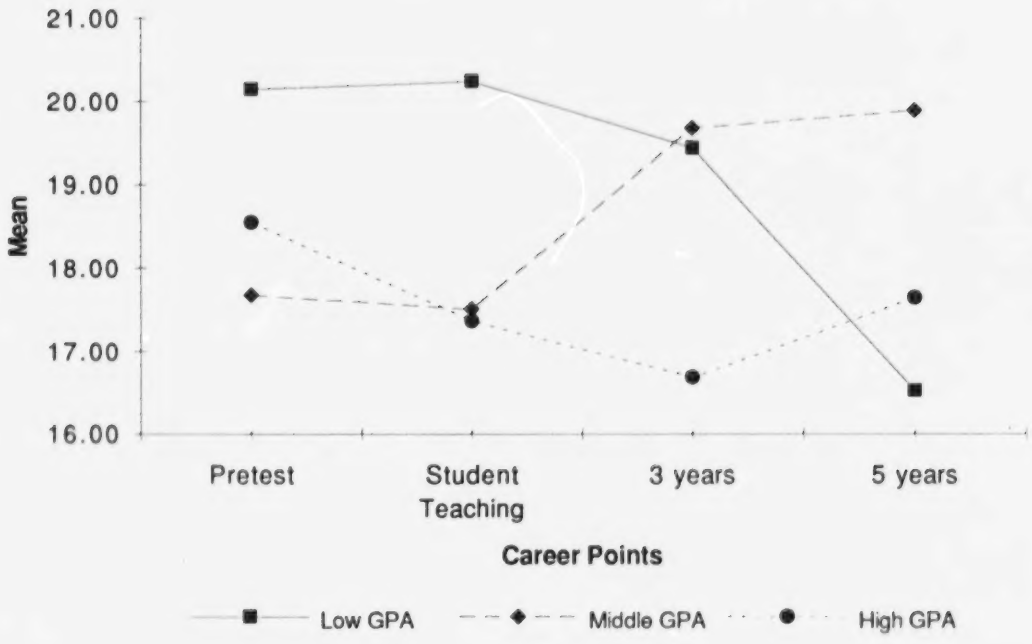

Figure 3
Self Concerns